

## Claims

1. A radiation protection arrangement (20; 30; 40; 50) for screening radiation emitted by a radiation source, in particular an X-ray source (3), having
  - a screening element (22, 23; 32a, 33a-c; 42, 43; 52) which comprises or includes a radiation protection material, and
  - a cover (24, 25; 34a, 35a-c; 44, 45; 54) which is matched in shape to the screening element (22, 23; 32a, 33a-c; 42, 43; 52) and completely surrounds the latter, it being possible to pull the cover (24, 25; 34a, 35a-c; 44, 45; 54) over the screening element (22, 23; 32a, 33a-c; 42, 43; 52) and completely separate it therefrom.
2. A radiation protection arrangement according to Claim 1, characterized in that
  - the cover (24, 25; 34a, 35a-c; 44, 45; 54) comprises a material which can be sterilized using a suitable device or a suitable process.
3. A radiation protection arrangement according to Claim 1 or 2, characterized in that
  - for the purpose of altering the length, the cover (24, 25; 34a, 35a-c, 44, 45; 54), with the screening element (22, 23; 32a, 33a-c; 42, 43; 52) arranged therein, can be turned up in at least one direction and fixed in the turned-up arrangement using a fixing device (27; 37, 38, 39; 47).
4. A radiation protection arrangement according to Claim 3, characterized in that
  - the fixing device is formed by press studs (27; 37; 47).

5. A radiation protection arrangement according to Claim 3, characterized in that  
the fixing device is formed by a hook-and-burr closure (38).
6. A radiation protection arrangement according to Claim 3, characterized in that  
the fixing device is formed by a tie closure (39).
7. A radiation protection arrangement according to one of the preceding claims,  
characterized in that  
the cover (24, 25; 34a, 35a-c; 44, 45; 54) has means for securing it to a carrier  
element (21, 31a-c, 41) which holds the screening element (22, 23; 32a, 33a-c; 42, 43;  
52).
8. A radiation protection arrangement according to Claim 7, characterized in that  
the means for securing are tapes (26).
9. A radiation protection arrangement according to Claim 7, characterized in that  
the means for securing are press studs.
10. A radiation protection arrangement according to Claim 7, characterized in that  
the means for securing are hook-and-burr closures.
11. A radiation protection arrangement according to one of the preceding claims,  
characterized in that

the screening element is formed by a single blanket (23, 33a-c, 52) which includes an X-ray screening material, and the cover is formed by a sheath (25, 35a-c, 54) which is matched in its dimensions to the blanket (23, 33a-c, 52) and is open to one side.

12. A radiation protection arrangement according to one of Claims 1 to 10, characterized in that

the screening element comprises a plurality of slats (43) arranged next to one another and including an X-ray screening material and are secured at one end to a common carrier element (41),

the cover having a plurality of elongate sheaths (45) for receiving a respective slat (43) and connected to one another at one end by way of a common cuff (45a).

13. A radiation protection arrangement according to Claim 12, characterized in that

the slats (43) are arranged such that they overlap.

14. A radiation protection arrangement according to one of Claims 3 to 6 and Claim 12 or 13, characterized in that

each sheath (45) has its own fixing device (47) for the purpose of altering the length.

15. A radiation protection arrangement according to one of the preceding claims, characterized in that

the screening element (22, 23; 32a, 33a-c; 42, 43; 52) includes a lead sheet or lead rubber blanket surrounded by a PVC cover.

16. A radiation protection arrangement according to Claim 15, characterized in that

the screening element (22, 23; 32a, 33a-c; 42, 43; 52) has a lead equivalence value of approximately 0.5mm.

17. A radiation protection arrangement according to one of the preceding claims, characterized in that

it is arranged on the underside of a radiation protection panel (6).

18. A radiation protection arrangement according to one of Claims 1 to 16, characterized in that

it forms a lower body protection arranged to the side of a medical operating or treatment table (2).

19. A cover (24, 25; 34a, 35a-c; 44, 45; 54) for a screening element (22, 23; 32a, 33a-c; 42, 43; 52) which comprises or includes a radiation protection material and is provided for use in a radiation protection arrangement (20; 30; 40; 50) for screening radiation emitted by a radiation source, in particular an X-ray source (3), the cover (24, 25; 34a, 35a-c; 44, 45; 54) being constructed such that it can be pulled over the screening element (22, 23; 32a, 33a-c; 42, 43; 52) and completely separated therefrom again.

20. A cover according to Claim 19, characterized in that

the cover (24, 25; 34a, 35a-c; 44, 45; 54) comprises a material which can be sterilized using a suitable device or a suitable process.

21. A cover according to Claim 19 or 20, characterized in that,

for the purpose of altering the length, the cover can be turned up in at least one direction and fixed in the turned-up arrangement using a fixing device (27; 37, 38, 39; 47).

22. A cover according to one of Claims 19 to 21, characterized in that

the cover is sheath (25, 35a-c, 54) which is matched in its dimensions to the screening element (22, 23; 32a, 33a-c; 42, 43; 52) and is open to one side.

23. A cover according to one of Claims 19 to 21, characterized in that

the cover has a plurality of elongate sheaths (45) which are connected to one another at one end by way of a common cuff (45a).

24. A cover according to Claims 21 and 23, characterized in that

each sheath (45) has its own fixing device (47) for the purpose of altering the length.